

# HG-186A

Shipped in packet-tape reel(4,000pcs per reel)

Notice : It is requested to read and accept "IMPORTANT NOTICE" written on the back of the front cover of this catalogue.

## ●Absolute Maximum Ratings

Item	Symbol	Limit	Unit
Max. Input Voltage	$V_C$	8	V
Max. Input Power	$P_D$	150	mW
Operating Temp. Range	Topr.	-40 ~ +125	°C
Storage Temp. Range	Tstg.	-40 ~ +150	°C



## ●Electrical Characteristics ( $T_a=25^\circ\text{C}$ )

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Output Hall Voltage	$V_H^*$	$B=50\text{mT}, V_C=6\text{V}$	80		110	mV
Input Resistance	$R_{in}$	$B=0\text{mT}, I_C=0.1\text{mA}$	2,200	2,400	3,200	$\Omega$
Output Resistance	$R_{out}$	$B=0\text{mT}, I_C=0.1\text{mA}$	4,400	4,800	6,400	$\Omega$
Offset Voltage	$V_{os}(V_o)$	$B=0\text{mT}, V_C=6\text{V}$	-8		8	mV
Temp. Coefficient of $V_H$	$\alpha V_H^*$	$B=50\text{mT}, I_C=1\text{mA}$ $T_a=25\sim 125^\circ\text{C}$			-0.08	%/°C
Temp. Coefficient of $R_{in}$	$\alpha R_{in}^*$	$B=0\text{mT}, I_C=0.1\text{mA}$ $T_a=25\sim 125^\circ\text{C}$			0.3	%/°C
Linearity	$\Delta K^*$	$B=0.1/0.5\text{T}, I_C=1\text{mA}$			2	%

Notes : 1.  $V_H = V_{HM} - V_{os}(V_o)$  ( $V_{HM}$ :meter indication)

$$2. \alpha V_H = \frac{1}{V_H(T_1)} \times \frac{V_H(T_2) - V_H(T_1)}{(T_2 - T_1)} \times 100$$

$$3. \alpha R_{in} = \frac{1}{R_{in}(T_1)} \times \frac{R_{in}(T_2) - R_{in}(T_1)}{(T_2 - T_1)} \times 100$$

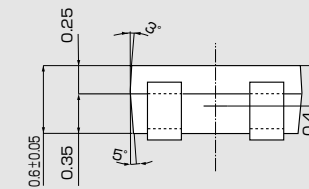
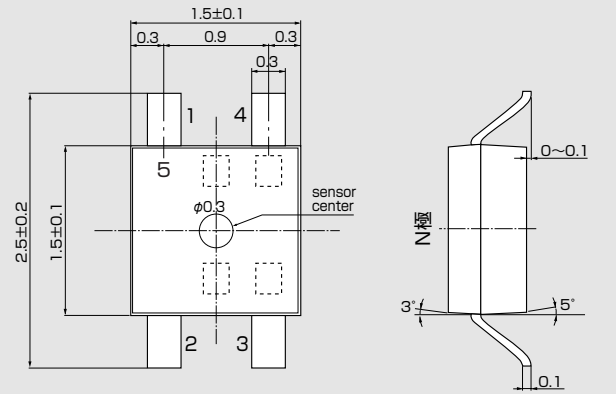
$$4. \Delta K = \frac{K(B_1) - K(B_2)}{[K(B_1) + K(B_2)]/2} \times 100$$

$$T_1 = 25^\circ\text{C}, T_2 = 125^\circ\text{C}$$

$$K = \frac{V_H}{I_C \cdot B}$$

$$B_1 = 0.5\text{T}, B_2 = 0.1\text{T}$$

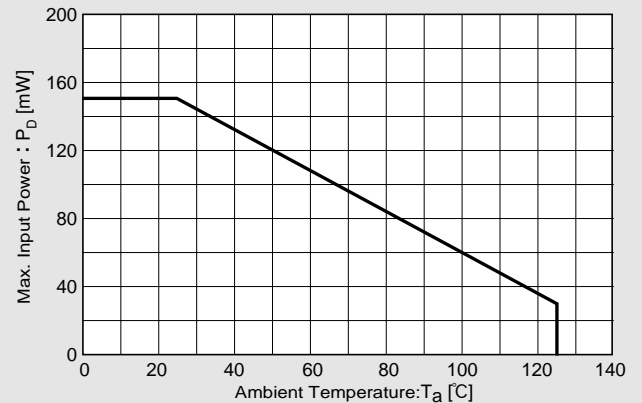
## ●Dimensional Drawing (Unit : mm)



Pinning		
Input	1 (±)	3 (〒)
Output	2 (±)	4 (〒)

## ●Characteristic Curves

### Allowable Package Power Dissipation



## ●Taping

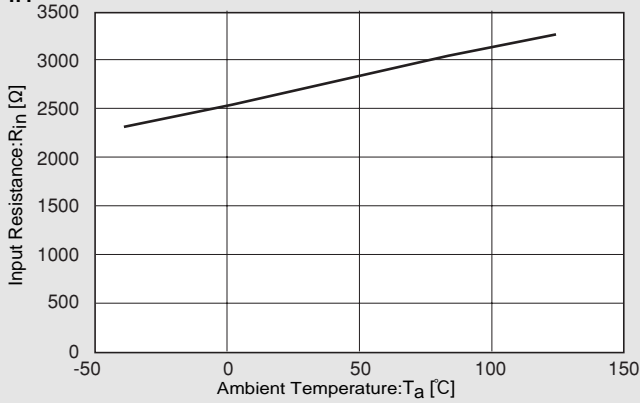


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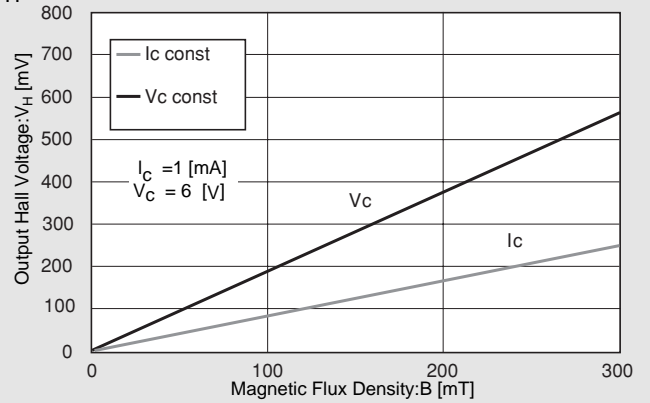
- Handling precautions required for preventing electrostatic discharge.
- This product contains gallium arsenide (GaAs). Handling and discarding precautions required.

●Characteristic Curves

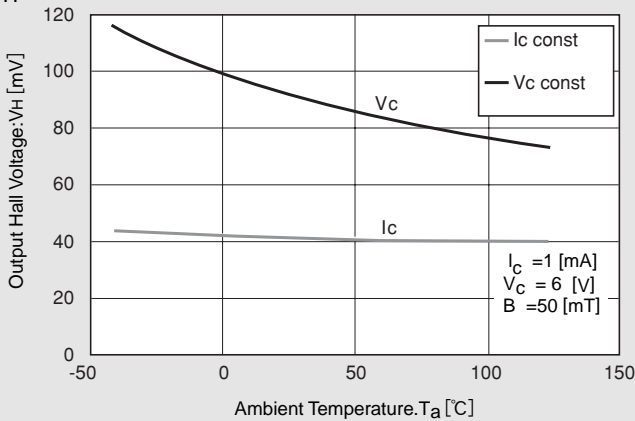
$R_{in}-T$



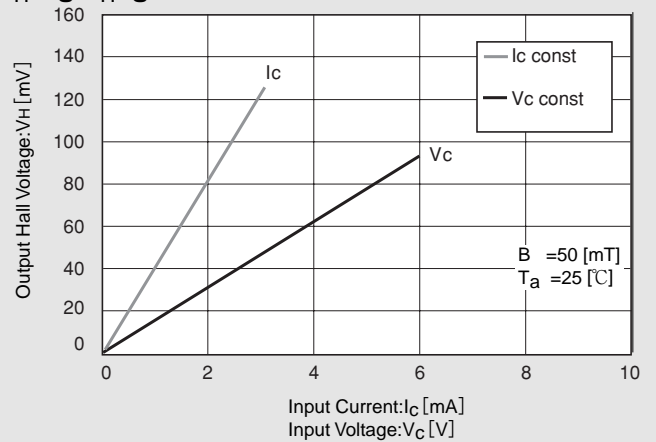
$V_H-B$



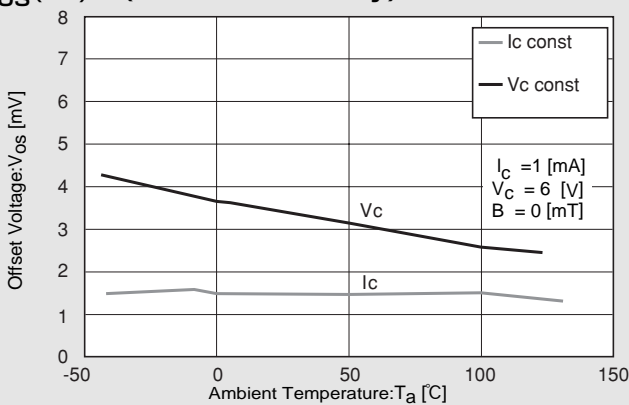
$V_H-T$



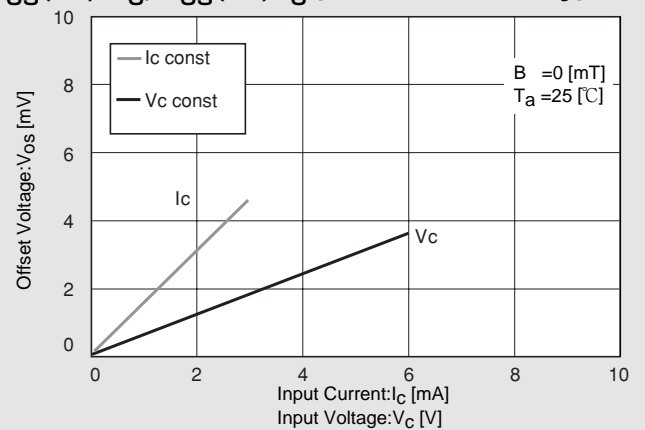
$V_H-V_C, V_H-I_C$



$V_{OS}(V_u)-T$  (For reference only)



$V_{OS}(V_u)-V_C, V_{OS}(V_u)-I_C$  (For reference only)



※Magnetic Flux Density  
 1[mT]=10[G]

In This Example :  $R_{in}$ =2659 [Ω] ,  $V_{OS}$ =3.44 [mV] ,  $V_c$ =6 [V]

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June 2, 2010

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